

Model VRV-TC

In-Line Sanitary Vacuum Relief Valve



- All Stainless Steel standard. (Hastelloy, Monel, Alloy 20 or Titanium Check Valve are also available)
- 1/2"-3" Sanitary Tri-clamp
- Adjustable opening pressures from 0.5 PSI (-0.03 Barg) to 3 PSI (-0.2 Barg) or factory set to 1.5 psig (0.1 barg)

Features

- **Body:** Standard materials are 303SS & 316 Stainless Steel
- **Piston:** 303SS & 316 Stainless Steel
- **Spring:** 303SS & 316 Stainless Steel

- **Lock nut:** 303SS & 316 Stainless Steel
- **Elastomeric seal:** Bubble-tight seal is achieved with soft elastomers such as Buna, Viton, and EPDM and Kalrez, to a lesser degree with the harder seal material, Teflon (PTFE) .
- **Tamper-proof construction-**This valve is not externally adjustable & requires removal of the valve to change the pressure setting after the system is depressurized.
- **Adjustable pressure-setting valve** can be factory-set or adjusted in the field. Standard set pressure is 1.5 psig (0.10 barg), but can be customized

Applications

This is an In-Line poppet type vacuum relief valve, allowing flow to pass through a pipe line only in one direction. When flow reverses, the poppet will close and prevent flow in the opposite direction. Observe the maximum working pressure listed for each model. Select seat materials from pricing pages.

This valve is normally used for liquids, air, or gases Use only clean filtered or strained liquids or gases. To make sure the valves are protected from dirt and debris which might clog the valve, a strainer with a fine wire mesh should be installed before the inlet of the valve. In-line strainer fittings or basket strainers can be purchased from Straval to solve this problem. The valve can also be used for vacuum relief service where the vacuum is connected to the discharge port. Please contact Factory for technical assistance!

Options

Scroll down below to click on a valve size for pricing and then click on the spring range to see which options are available for that size. After selecting your options you may then print out a price, e-mail it (without having to contact the factory), and then when you are ready, proceed to order.

When ordering don't forget to state your desired relief set pressure if you expect the valve to relieve at only one pressure. There is no extra charge for this. This pressure will be engraved on the valve body. **If the set pressure is not specified, the valve will be set at or below the stated spring range as selected for the order and no set pressure will be engraved.**

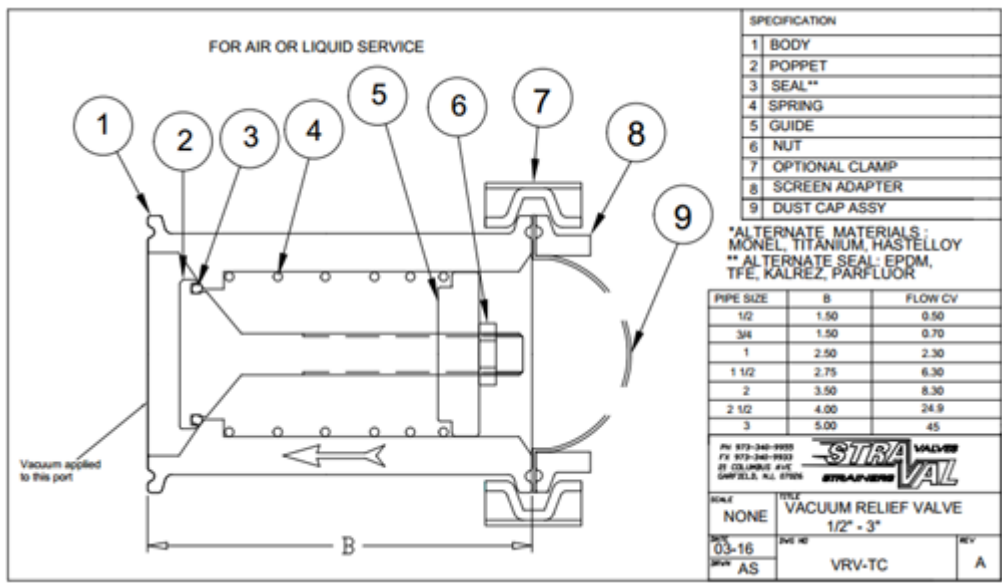
Principle of Operation

This is a poppet (piston) and spring type relief valve where the spring constantly opposes the pressure acting against the piston which seals off the inlet port. The desired set pressure or relief is achieved by compressing the spring until the spring force is adequate to balance the pressure force acting against the poppet. The valve can be ordered factory-set for a specific relief pressure, or can be adjusted in the field. Setting the correct relief pressure in the field may require several tries, and requires measurement with a pressure gauge to verify. In order to make the pressure adjustment, the valve needs to be unscrewed from its mounting position with pressure removed from the line. Increasing the spring pressure increases the relief pressure and visa versa. A small nut driver and screwdriver may be used to make pressure adjustments for the low pressure springs. Where frequent pressure adjustments are anticipated, a special adjusting tool can be purchased from Straval which can be used for the 1/4" RVi05 size only and also for the 1/8" & 1/4"Rva05 models. This tool can be purchased from Straval, Part Number **T234** (Click on link to order).

When reinstalling the 1/4"Npt model do not exceed 10 ft-lbs on the male pipe thread end as minor distortions to the body may occur if substantially exceeded.

The larger sizes can be more easily adjusted with more conventional tools. However, ordering the valve to the correct set pressure would minimize or

eliminate the need for making pressure adjustments in the field.



VRV-TC

The flow arrow above is shown in the normal flow position
 When flow reverses, the valve closes

Material List and Specification

#	Item	Materials
1.	Body	303SS & 316SS
2.	Poppet	303SS & 316SS
3.	Seal	Buna, Viton, Epdm, Ptfе, Kalrez
4.	Spring	302SS & 316SS
5.	Guide	303SS & 316SS
6.	Nut	304SS & 316SS

Dimensions

Pipe Size	B	Flow CV
1/2	1.50	0.50
3/4	1.50	0.70
1	2.50	2.30
1 1/2	2.75	6.30
2	3.50	8.30
2 1/2	4.00	24.9
3	4.50	45

Note: Dimensions are approximate and are subject to change without notice. Request certified dimensions before final product installation.

1/2" VRV05-05TC

Pressure Group 0.5-15 psi (0.034-1.03 bar) 300 psi ~20 bar rating

Multiple Spring Ranges from:0.5-15 psig (0.034-1.03 barg) Select spring from pricing page

3/4" VRV05-07TC

Pressure Group 0.5-15 psi (0.034-1.03 bar) 300 psi ~20 bar rating

Multiple Spring Ranges from:0.5-15 psig (0.034-1.03 barg) Select spring from pricing page

1" VRV05-10TC

Pressure Group 0.5-15 psi (0.034-1.03 bar) 300 psi ~20 bar rating

Multiple Spring Ranges from:0.5-15 psig (0.034-1.03 barg) Select spring from pricing page

1 1/2" VRV05-15TC

Pressure Group 0.5-15 psi (0.034-1.03 bar) 300 psi ~20 bar rating

Multiple Spring Ranges from:0.5-15 psig (0.034-1.03 barg) Select spring from pricing page

2" VRV05-20TC

Pressure Group 0.5-15 psi (0.034-1.03 bar) 300 psi ~20 bar rating

Multiple Spring Ranges from:0.5-15 psig (0.034-1.03 barg) Select spring from pricing page

2 1/2" VRV05-25TC

Pressure Group 0.5-15 psi (0.034-1.03 bar) 300 psi ~20 bar rating

Multiple Spring Ranges from:0.5-15 psig (0.034-1.03 barg) Select spring from pricing page

3" VRV05-30TC

Pressure Group 0.5-15 psi (0.034-1.03 bar) 300 psi ~20 bar rating

Multiple Spring Ranges from:0.5- psig (0.034- barg) Select spring from pricing page

The spring ranges listed above are not achievable with one spring, but are compressed to show overall product capability. Select a specific spring range in the pricing pages or specify a set pressure when ordering.